

10/081 936

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PATENT

Attorney Docket No.: A-63761-7

Attorney File No.: 463037-00048

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

KAYYEM *et al.*

Patent No.: 6,977,151 B2

Issued: December 20, 2005

For: *Electrodes Linked via Conductive
Oligomers to Nucleic Acids*

Examiner: WHISENANT, Ethan C.

Group Art Unit: 1634

CERTIFICATE OF MAILING

I hereby certify that this correspondence, including listed enclosures, is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450:

Dated: January 20, 2006

Signed:

Brent Yonahara

**REQUEST FOR CORRECTED PATENT
UNDER 35 U.S.C. § 254 AND 37 C.F.R. § 1.322(b)**

Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

**Certificate
JAN 25 2006
of Correction**

Sir:

It is hereby requested that a corrected patent under 35 U.S.C. § 254 and 37 C.F.R. §§ 1.322(b) be issued for the above-captioned United States Patent. This petition is being requested due to mistakes which appear on the printed patent.

The mistakes were incurred by fault of the U.S. Patent and Trademark Office, of which are clearly disclosed in the records of the Office, as noted below:

1. A Notice of Allowance was mailed May 24, 2005. The allowed claims were Claims 47-50, 52-75, and 106.
2. Subsequently, a Supplemental Notice of Allowance, with an Examiner's Amendment, was mailed on July 15, 2005. In the Examiner's Amendment, the Examiner

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amended the claims. The revised allowed claims were Claims 47-50, 52-59, 61-73, 75, and 106, renumbered as Claims 1-27. A copy of that Examiner's Amendment is attached to this request herewith.

3. None of the amended claims as entered in the Examiner's Amendment was printed in the Letters Patent issued December 20, 2005.

A completed Form PTO-1050 (PTO/SB/44) accompanies this request, with the corrections to the claims printed thereon. However, due to the substantive nature of the errors, Applicants respectfully request the Director issue a corrected patent under 35 U.S.C. § 254 and 37 C.F.R. § 1.322(b).

The above-noted corrections are mistakes which clearly disclosed in the records of the Office, and do not involve such changes in the patent as would constitute new matter or would require reexamination.

While no further fee is believed to be due, if this belief is in error, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-2319 (Our Order No. 463037-00048; Docket No.: A-63761-7).

Respectfully submitted,
DORSEY & WHITNEY LLP

Dated: Jan. 19, 2006
Customer Number: 32940
Dorsey & Whitney LLP
Intellectual Property Department
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BY: J.P. Bernhardt
Jeffery P. Bernhardt, Reg. No. 54,997 for
Robin M. Silva, Reg. No. 38,304
Filed Under 37 C.F.R. § 1.34

Patent No. 6,977,151 B2
Issued: December 20, 2005

Attachments : Form PTO/SB/44, Substitute for Form PTO-1050
Return Postcard



UNITED STATES PATENT AND TRADEMARK OFFICE

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|-----------------------|------------------|
| 10/081,936 | 02/20/2002 | Jon Faiz Kayyem | A-63761-7/RFT/RMS/CYO | 4579 |

7590 07/15/2005

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Suite 3400
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EXAMINER

WHISENANT, ETHAN C

ART UNIT

PAPER NUMBER

1634

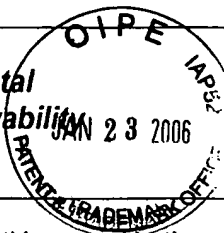
DATE MAILED: 07/15/2005



Please find below and/or attached an Office communication concerning this application or proceeding.

JAN 26 2006

**Supplemental
Notice of Allowability**



Application No.

10/081,936

Examiner

Ethan Whisenant, Ph.D.

Applicant(s)

KAYYEM ET AL.

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Interview held 06-07 JUL 05.
2. ☒ The allowed claim(s) is/are 47-50, 52-59, 61-73, 75 and 106 - now renumbered as Claims 1-27.
3. ☒ The drawings filed on 01 JUL 02 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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SUPPLEMENTAL NOTICE OF ALLOWABILITY

1. **Claim(s) 47-50,52-75 and 106** as allowed in the Office Action mailed 25 MAY 05 is/are pending.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given during a phone call on 06 JUL 05 by Michael Kolman :

Amend Claim 47 to read:

47. A composition comprising:

- a) an electrode comprising a passivation agent monolayer comprising nucleic acid probes attached to said electrode with a spacer; and
- b) a hybridization indicator.

Cancel Claim 60

Amend Claim 61 to read:

61. A composition according to claim 47 wherein said passivation agent monolayer is an insulator.

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Amend Claim 62 to read:

62. A composition comprising:

- a) a hybridization indicator; and
- b) an array of electrodes, each comprising
 - i) a passivation agent monolayer;
 - ii) a nucleic acid probe attached to said electrode with a spacer.

Cancel Claim 74

Amend Claim 75 to read:

75. A composition according to claim 62 wherein said passivation agent monolayer is an insulator.

Amend Claim 106 to read:

106. A composition comprising:

- a) an array of electrodes, each comprising a passivation agent monolayer comprising nucleic acid probes attached to said electrode with a spacer, wherein said spacer comprises an insulator; and
- b) a hybridization indicator.

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CONCLUSION

3. Claim(s) 47-50, 52-59, 61-73, 75 and 106 is/are allowable for the reason(s) of record and have now been renumbered as Claims 1-27.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ethan Whisenant, Ph.D. whose telephone number is (571) 272-0754. The examiner can normally be reached Monday-Friday from 8:30AM -5:30PM EST or any time via voice mail. If repeated attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached at (571) 272-0745.

The Central Fax number for the USPTO is (571) 273-8300. Before faxing any papers, please inform the examiner to avoid lost papers. Please note that the faxing of papers must conform with the Notice to Comply published in the Official Gazette, 1096 OG 30 (November 15, 1989).


ETHAN WHISENANT
PRIMARY EXAMINER

Art Unit 1634

JAN 26 2006

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

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PATENT NO. : 6,977,151 B2
DATED : December 20, 2005
INVENTORS : KAYYEM *et al.*

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims, columns 67-68, beginning at line 28, please replace the section in its entirety and replace with the following:

1. A composition comprising:
 - a) an electrode comprising a passivation monolayer comprising nucleic acid probes attached to said electrode with a spacer; and
 - b) a hybridization indicator.
2. A composition according to claim 1 wherein said hybridization indicator is an intercalator.
3. A composition according to claim 1 wherein said hybridization indicator is methylene blue.
4. A composition according to claim 1 further comprising a target nucleic acid hybridized to said probe to form a hybridization complex, wherein said hybridization indicator is associated with said hybridization complex.
5. A composition according to claim 1 further comprising a co-reductant.
6. A composition according to claim 1 wherein said nucleic acid probe is a single stranded nucleic acid.
7. A composition according to claim 1 wherein said nucleic acid probe comprises a double stranded portion.
8. A composition according to claim 1 further comprising a soluble electron source.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Dorsey & Whitney LLP
555 California Street, Suite 1000
San Francisco, CA 94104-1513

No. of additional copies

⇒ 10

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.
SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

9. A composition according to claim 8 where said soluble electron source comprises ferricyanide.
10. A composition according to claim 1 wherein said spacer is a conductive oligomer.
11. A composition according to claim 1 wherein said spacer is an insulator.
12. A composition according to claim 11 wherein said insulator comprises $(CH_2)_6$.
13. A composition according to claim 1 wherein said passivation agent monolayer is an insulator.
14. A composition comprising:
 - a) a hybridization indicator; and
 - b) an array of electrodes, each comprising
 - i) a passivation agent;
 - ii) a nucleic acid probe attached to said electrode with a spacer.
15. A composition according to claim 14 wherein said hybridization indicator is an intercalator.
16. A composition according to claim 14 wherein said hybridization indicator is methylene blue.
17. A composition according to claim 14 further comprising a target nucleic acid hybridized to said probe to form a hybridization complex, wherein said hybridization indicator is associated with said hybridization complex.
18. A composition according to claim 14 further comprising a co-reductant.
19. A composition according to claim 14 wherein said nucleic acid probe is a single stranded nucleic acid.
20. A composition according to claim 14 wherein said nucleic acid probe comprises a double stranded portion.
21. A composition according to claim 14 further comprising a soluble electron source.
22. A composition according to claim 21 where said soluble electron source comprises ferricyanide.

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23. A composition according to claim 14 wherein said spacer is a conductive oligomer.
24. A composition according to claim 14 wherein said spacer is an insulator.
25. A composition according to claim 24 wherein said insulator comprises $(CH_2)_6$.
26. A composition according to claim 14 wherein said passivation agent monolayer is an insulator.
27. A composition comprising:
 - a) an array of electrodes, each comprising a passivation agent monolayer comprising nucleic acid probes attached to said electrode with a spacer, wherein said spacer comprises an insulator; and
 - b) a hybridization indicator.

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